

WHAT IS CLAIMED IS:

1. A color cathode ray tube comprising:
a panel, said panel including an outer surface which is substantially flat and an inner surface on which a screen composed of red, green and blue phosphors is formed;
wherein a screen transmittance of the panel increases and then decreases along a line from a center portion to a peripheral portion of the panel.

2. The cathode ray tube of claim 1, wherein the screen transmittance of the panel satisfies the following condition;

$$STM_{\text{HALF}} \geq STM_{\text{C}}, STM_{\text{HALF}} \geq STM_{\text{E}},$$

wherein STM_{C} is a screen transmittance at the center portion of the panel, STM_{E} is a screen transmittance at the peripheral portion, and STM_{HALF} is a screen transmittance at a point positioned about 1/2 the distance between the center portion and the peripheral portion.

3. The cathode ray tube of claim 1, wherein the screen transmittance of the panel is maximized at a doming portion, and wherein the doming portion is a region extending along a major axis from 2/5 to 4/5 and extending along a minor axis from 1/8 to 7/8 on a basis of 1/2 of the surface of an effective surface portion of the panel in which the screen is formed.

4. The cathode ray tube of claim 1, wherein the screen transmittance in the center portion of the panel is 60% or lower.

5. The cathode ray tube of claim 1, wherein the screen transmittance of the panel is increases from the center portion of the panel to a long side portion of the panel along a major axis of the panel.

6. The cathode ray tube of claim 1, wherein,

$$0.94 \leq STM_V / STM_C \leq 1.16, \text{ and}$$

$$0.94 \leq STM_H / STM_C \leq 1.16,$$

wherein STM_C is a screen transmittance of the center of the panel, STM_V is a screen transmittance of a long side portion, and STM_H is a screen transmittance of a short side portion.

7. The cathode ray tube of claim 1, wherein:

$$1.00 \leq STM_{DO} / STM_C \leq 1.13,$$

wherein a doming portion is a region extending along a major axis from 2/5 to 4/5 and extending along a minor axis from 1/8 to 7/8 on a basis of 1/2 of the surface of an effective surface portion of the panel in which the screen is formed, STM_C is a screen transmittance of the center of the panel, and STM_{DO} is a screen transmittance of the doming portion.

8. The cathode ray tube of claim 1, wherein,

$$1.05 \leq W_{PDO} / W_{PC} \leq 1.25,$$

wherein the doming portion is a region extending along a major axis from 2/5 to 4/5 and extending along a minor axis from 1/8 to 7/8 on a basis of 1/2 of the surface of an effective surface portion of the panel in which the screen is formed, W_{PC} is a width of the phosphor at the center portion of the panel, and W_{PD} is a width of the

phosphor at the doming portion of the panel.

9. The cathode ray tube of claim 1, wherein,

$$0.90 \leq W_{PV} / W_{PC} \leq 1.10,$$

wherein W_{PC} is a width of the phosphor at the center portion of the panel, and W_{PV} is a width of the phosphor at a long side portion of the panel.

10. A color cathode ray tube comprising:

a panel, said panel including an outer surface which is substantially flat and an inner surface on which a screen composed of red, green and blue phosphors and black layer;

wherein a screen transmittance of the panel satisfies the following conditions:

$$STM_{HALF} \geq STM_C, \text{ and}$$

$$STM_{HALF} \geq STM_H;$$

wherein STM_C is a screen transmittance at a center portion of the panel, STM_H is a screen transmittance at a short side portion of the panel, and STM_{HALF} is a screen transmittance at a point positioned about 1/2 of the distance between the center portion and the short side portion of the panel.

11. The cathode ray tube of claim 10, wherein a glass transmittance of the panel is 41-79%.

12. The cathode ray tube of claim 10, wherein a screen pitch of the screen is increased from the center portion of the panel to a peripheral portion of the panel.

13. The cathode ray tube of claim 10, wherein a width of the phosphor of the screen increases from the center portion of the panel to a peripheral portion of the panel along a major axis of the panel.

14. The cathode ray tube of claim 10, wherein:

$$1.4 \leq PH_E / PH_C \leq 1.7,$$

wherein PH_C is a screen pitch of the phosphor at the center portion of the panel and PH_E is a screen pitch of the phosphor at a peripheral portion of the panel.

15. The cathode ray tube of claim 10, wherein:

$$1.27 \leq W_{PD} / W_{PC} \leq 1.67,$$

wherein W_{PC} is a width of the phosphor at the center portion of the panel, and W_{PD} is a width of the phosphor at a corner portion of the panel.

16. The cathode ray tube of claim 10, wherein:

$$1.27 \leq W_{PH} / W_{PC} \leq 1.53,$$

wherein W_{PC} is a width of the phosphor at the center portion of the panel, and W_{PH} is a width of the phosphor at the short side portion of the panel.

17. The cathode ray tube of claim 10, wherein a radius of curvature of the outer surface of the panel is 30,000mm or longer.

18. The cathode ray tube of claim 10, wherein the inner surface of the panel has a radius of curvature in a range of about $1.2R$ to $8R$ where R is obtained by multiplying a diagonal length of an effective surface of the panel in which the phosphor

screen is formed by 1.767.

19. The cathode ray tube of claim 10, wherein a wedge ratio which is a ratio between a thickness of glass at the center of the panel and a thickness of glass at a peripheral portion of the panel is about 140% or higher.